

WHAT IS CLAIMED IS:

1. An isolated polynucleotide comprising a member selected from the group consisting of:
  - (a) a polynucleotide encoding the polypeptide comprising amino acid 1 to amino acid 142 of SEQ ID NO:2;
  - (b) a polynucleotide capable of hybridizing to and which is at least 70% identical to the polynucleotide of (a); and
  - (c) a polynucleotide fragment of the polynucleotide of (a) or (b).
2. The polynucleotide of claim 1 encoding the polypeptide comprising amino acid 1 to amino acid 142 as set forth in SEQ ID NO:2.
3. The polynucleotide of claim 1 wherein the polynucleotide is DNA.
4. The polynucleotide of claim 1 wherein the polynucleotide is RNA.
5. The polynucleotide of claim 1 wherein the polynucleotide is genomic DNA.
6. The polynucleotide of claim 2 encoding the polypeptide comprising amino acids 1 to 142 of SEQ ID NO:2.
7. The polynucleotide of claim 2 comprising the sequence as set forth in SEQ ID NO:1 from nucleotide 1 to nucleotide 600.
8. The polynucleotide of claim 2 comprising the sequence as set forth in SEQ ID NO:2 from nucleotide 46 to nucleotide 471.
9. An isolated polynucleotide comprising a member selected from the group consisting of:
  - (a) a polynucleotide which encodes a polypeptide having the amino acid sequence expressed by the DNA contained in ATCC Deposit No. 75514;
  - (b) a polynucleotide capable of hybridizing to and which is at least 70% identical to the polynucleotide of (a); and
  - (c) a polynucleotide fragment of the polynucleotide of (a) or (b).
10. The isolated polynucleotide of claim 9 comprising a sequence which encodes a polypeptide having the amino acid sequence expressed by the DNA contained in ATCC Deposit No. 75514.

11. A vector containing the DNA of claim 2.
12. A host cell genetically engineered with the vector of claim 11.
13. A process for producing a polypeptide comprising: expressing from the host cell of claim 12 the polypeptide encoded by said DNA.
14. A process for producing cells capable of expressing a polypeptide comprising genetically engineering cells with the vector of claim 11.
15. A polypeptide selected from the group consisting of: (i) a polypeptide having the deduced amino acid sequence of SEQ ID NO:2 and fragments, analogs and derivatives thereof and (ii) a polypeptide encoded by the DNA of ATCC Deposit No. 75514 and fragments, analogs and derivatives of said polypeptide.
16. The polypeptide of claim 15 wherein the polypeptide has the deduced amino acid sequence of SEQ ID NO:2.
17. An antibody against the polypeptide of claim 15.
18. A compound which inhibits the polypeptide of claim 15.
19. A compound which activates the polypeptide of claim 15.
20. A method for the treatment of a patient having need of HMF comprising: administering to the patient a therapeutically effective amount of the polypeptide of claim 15.
21. The method of claim 20, wherein the therapeutically effective amount of the polypeptide is administered to treat leukemia.
22. The method of claim 20, wherein the polypeptide is administered by providing to the patient DNA encoding said polypeptide and expressing said polypeptide *in vivo*.
23. A method for the treatment of a patient having need to inhibit HMF comprising: administering to the patient a therapeutically effective amount of the compound of claim 18.

24. A process for identifying compounds active as agonists or antagonists to HMF comprising:

(a) combining a compound to be screened, the polypeptide of claim 15 and a reaction mixture containing cells under conditions where the cells are normally stimulated by said polypeptide, said reaction mixture containing a label incorporated into the cells as they proliferate; and

(b) determining the extent of proliferation of the cells to identify if the compound is an effective agonist or antagonist.

25. A process for diagnosing a disease or the susceptibility to a disease related to the underexpression of the polypeptide of claim 15 comprising:

detecting in a sample derived from a host a mutation in the nucleic acid sequence of claim 1.

26. A diagnostic process comprising:

analyzing for the presence of the polypeptide of claim 15 in a sample derived from a host.

*Add A1*